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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/684,332 | 10/10/2003 | Raanan A. Miller | 3239.1039-001 | 9247 |

28120 7590 08/24/2004

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| EXAMINER |
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VANORE, DAVID A

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| ART UNIT | PAPER NUMBER |
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2881

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/684,332

Applicant(s)

MILLER ET AL.

Examiner

David A Vanore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION***Election/Restrictions***

This application contains claims directed to the following patentably distinct species of the claimed invention:

Species I: Claims 1-13, 15, and 17 drawn to a system for gas analysis comprising flow path, a soft ionization source, an ion filter including ion filter electrodes across said flow path, an electronic input, said electronic input coupled to said ion filter electrodes for generating a high-low varying asymmetric displacement field between said electrodes across said flow path, said asymmetric displacement field imparting transverse motion to said flow of ion species according to mobility characteristics of said ion species and according to extant field conditions, said transverse motion driving unwanted ion species in said flow of ion species into said ion filter electrodes for neutralization thereof, said asymmetric displacement field being compensated, said compensation for selecting at least one ion species out of said flow of ion species and accommodating travel of said selected ion species in said flow path to said ion outlet for detection without said neutralization, said ion filter distinguishing between ion species of an ionized NO_x sample based on differences in ion mobility in said filter field, and said filter passing selected said ion species of said ionized NO_x sample for detection based on said compensation, and said detected, passed, selected, ion species being identified based on historical detection data of said system and on said extant field conditions.

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Species II: Claims 14-16 drawn to a system for gas analysis comprising a differential ion mobility filter apparatus having an ion filter package with an internal flow path, said ion filter package including an ion filter, an inlet part and an outlet part, said inlet part, said ion filter, and said outlet part being coupled by said flow path, said flow path accommodating flow of ion species from said inlet part to said ion outlet via said ion filter, said ion filter package and flow path accommodating flow of at least a selected ion species to said ion outlet, said ion filter including ion filter electrodes, an electronic part having an input, said electronic input coupled to said ion filter electrodes for generating a high-low varying asymmetric displacement field across said flow path, said asymmetric displacement field imparting transverse motion to said flow of ion species according to mobility characteristics of said ion species and according to extant field conditions, said transverse motion driving unwanted ion species in said flow of ion species into said ion filter electrodes for neutralization thereof, said asymmetric displacement field being compensated, said compensation for selecting at least one ion species out of said flow of ion species and accommodating travel of said selected ion species in said flow path to said ion outlet for detection without said neutralization, said inlet part further including means for receiving a gas sample and means for ionizing said gas sample, said ion filter distinguishing between ion species of an ionized NO_x sample based on differences in ion mobility in said filter field, and said filter passing selected said ion species of said ionized NO_x sample for detection based on said compensation, and said detected, passed, selected, ion species being identified based on historical detection data of said system and on said extant

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field conditions.

Species III: Claims 18-20 drawn to a system and method for analyzing a gas sample comprising an ionizing means or associated step of ionization with a soft, non-radioactive ionizer, a means or step for submitting the ions to filtering, the means or step of scanning an ionized sample, the means or step for outputting a generated spectra showing NOx compounds in a sample.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

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Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A Vanore whose telephone number is (571) 272-2483. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (571) 272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dav


JOHN R. LEE
SUPERVISORY PATENT
TECHNOLOGY CENTER